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SAN FRANCISCO'S PROPOSED MODERN
WHOLESALE FOOD CENTER



UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Washington, D. C.

SAN FRANCISCO'S PROPOSED MODERN
WHOLESALE FOOD CENTER

Report by Harry G. Clowes, Agricultural Marketing Service,
U. S. Department of Agriculture, at meeting sponsored by
San Francisco Chamber of Commerce, November 10, 1955

INTRODUCTION

During the past summer the United States Department of Agriculture, at the invitation of the mayor of San Francisco, made a study of wholesale food handling in that city. The study, made in cooperation with the California State Department of Agriculture and the San Francisco Chamber of Commerce, was requested for the purpose of determining (1) the inadequacies of the present marketing facilities and handling methods of the fruit and vegetable industry, and (2) the kind of wholesale marketing facilities that would be required to handle these commodities efficiently. However, it soon became apparent that the facilities used for handling other commodities were in serious need of improvement. Hence, the study was expanded to include poultry, eggs, dairy products; meats and meat products; and dry groceries.

During their stay in the city USDA research men were pleased with the fine spirit of cooperation received in all their contacts with the food industry.

Over one and a half million persons in the San Francisco metropolitan area west of San Francisco Bay are dependent upon the wholesale food markets of the city. During 1954 an equivalent of 52,051 carlots of the 4 major food commodity groups included in the study, with a wholesale value of \$294,156,000, were handled through the wholesale market facilities in San Francisco. A breakdown of the carlot figures is shown in table 1.

Table 1.--Estimated receipts of food products by rail and motortruck; and by type of commodity, San Francisco, Calif., 1954

Type of commodity	Direct receipts		
	Rail and other	Motortruck	Total
	Equiv. carlots	Equiv. carlots	Equiv. carlots
Fresh fruits and vegetables.....	3,783	17,048	20,831
Poultry, eggs, and dairy products..	684	4,842	5,526
Meats and meat products.....	1,306	14,091	15,397
Dry groceries.....	474	9,823	10,297
Total.....	6,247	45,804	52,051

These food items were received from 48 States and many foreign countries. Retail stores, hotels, public institutions, wholesalers within the metropolitan area, the U. S. military, and ship chandlers received about 52 percent of the total food handled. Most of the rest was moved to cities and towns within 50 miles of the city.

As a result of this study, suggestions are offered for the building of a food center for the city, to handle all four of the major food categories listed in table 1. However, the plans for the four categories are presented separately, so that a market for fresh fruits and vegetables alone could be considered; or a market for fresh fruits and vegetables plus poultry, eggs, and dairy products; or one handling three or all four of the categories of foods. Thus those interested should be in a position to decide on a less comprehensive program if they feel that the entire project is beyond practical realization.

ORGANIZATION OF THE WHOLESALE FOOD BUSINESS IN SAN FRANCISCO

Approximately 171 independent dealers, 3 chainstore organizations, 8 national meat packer branch houses, and 8 public cold storage warehouses carried on the wholesale food business in the 4 major food groups studied. An attempt was made during the study to visit all of the operators and determine their facility requirements.

Business is transacted in the wholesale fresh fruit and vegetable industry by 73 independent wholesalers, all but 2 of whom are located in the Washington Street wholesale fruit and vegetable market area, and 3 chainstore organizations. The wholesale poultry, egg, and dairy product business is conducted by 15 independent dealers, 3 chainstore organizations, and 3 national meat packers; meats and meat products by 4 slaughterers, 13 wholesalers, 30 processors, 8 national meat packer branch houses, and 3 chainstore organizations; and dry groceries by 6 general line wholesalers, 3 wholesalers who deal in specialty items, and 3 chainstore organizations.

Ninety-two wholesalers and 3 cold storage warehouses are located in the northeastern edge of the city, usually referred to as "The Commission District," where trading was established during early gold mining days of California. At that time the shoreline of San Francisco Bay stretched along Battery Street and some of the old produce houses were housed in old sailing ships that had been abandoned along that street by gold seekers.

The produce district was destroyed by the San Francisco earthquake and fire in 1906 and the present buildings, erected on the old site immediately after the earthquake and some of the present wholesale houses have been in use ever since. Within this area all types of food wholesalers are located. About 79 wholesalers, 8 packer branch houses, 3 chainstore warehouses, and 5 public warehouses are in other locations throughout the city.

Over 1,792,800 square feet of floor space was occupied by all types of independent wholesalers. This figure does not include space occupied by streets and sidewalks, restaurants and cafes, parking, office buildings, slaughterers, and other types of businesses. Ownership of buildings by their operators varies widely from one commodity group to another. For example, it was the lowest (9 percent) for dealers in fresh fruits and vegetables and the highest (50 percent) for poultry, eggs, and meat products wholesalers.

DEFECTS OF THE PRESENT FACILITIES

Much has been said during the past 30 years about the defects and merits of the present food handling facilities in San Francisco. This analysis of the wholesale food handling facilities for the 4 commodity groups included in the survey revealed many defects, all of which make operating costs excessive and prevent efficient handling of food. For example, many wholesalers are using outmoded, multistory buildings of antiquated design, with inadequate aisle space, poorly located steps or elevators, structurally weak floors, partially flooded basements, no front or rear loading platforms, and little mechanical handling equipment. A large number of wholesalers do not have sufficient space for handling the present volume of foods. In most instances, wholesalers of fruits and vegetables use sidewalk space for sales and temporary storage. A large number of truckloads of perishable fruit and vegetable items are stacked in the street for several hours because of lack of space in stores. Refrigeration facilities are often inadequate and quantities of foods become spoiled. In many instances, a single entrance serves for both receiving and shipping, impeding the flow of supplies. Many wholesale stores can be reached only by moving products by handtruck over sidewalks and through congested streets.

In several commodity groups, no dealers have rail connections direct to their stores. Food received by rail must be carted from the team track yards to the stores, entailing costly charges for cartage. Such cartage adds to deterioration, shrinkage, breakage, and loss by theft; and represents a marketing cost that would be greatly reduced if all stores had modern facilities for receiving and handling.

Traffic congestion in and around the Washington Street produce market area has been acute for many years. Hundreds of motortrucks of all types haul supplies to and from the stores in this district and at peak periods there are traffic tieups of long duration. In one instance, it was noted that it took $1\frac{1}{2}$ hours for a truck to cross Drumm Street during the early morning rush hour on Washington Street. Some owners of large incoming trucks said, when visited at one of the California State Department of Agriculture's inspection points, that they were no longer bringing their loads to San Francisco because of the impossible traffic situation. These conditions greatly increase the cost of handling food and result in considerable deterioration of perishable products. Little can be done, apparently, to improve traffic conditions within the area.

The scattering of the wholesale food business in various parts of the city makes buying and selling difficult and costly. In none of the markets are hours for buying and selling very well regulated. Each wholesaler fixes his own work schedule, although most of them try to adhere to an 8-hour schedule, 5 days

per week. The lack of coordination among markets in establishing selling hours causes buyers considerable difficulty in arriving at a time when they can make a full selection with the best quality produce available. Prolonged selling hours also tend to produce wide fluctuations in prices during the day for some types of food products.

Many buildings in the Washington Street wholesale produce area are without hot water, and some without cold water, for proper cleaning. Public washrooms and toilet facilities are lacking. Streets sometimes are littered with broken crates and boxes, and at times decaying food is dumped into the streets.

NEED FOR A WHOLESALE FOOD CENTER

To correct these defects, drastic changes are needed in present wholesale market facilities in San Francisco. Most of the facilities were built to meet needs of another year. Since that time, methods of food handling and distribution have changed radically. The estimated population of San Francisco has increased from 343,000 in 1900 to over 800,000 in 1955, and that of the surrounding area has increased even faster. Food habits have undergone radical changes. Food transportation methods have improved to a point unbelievable a few years ago. With few exceptions, however, these changes and improvements have not been accompanied by a comparable expansion and improvement of wholesale food marketing facilities. The improvements made have been limited to a few wholesale houses, when the need for improvement was industry-wide.

The characteristics of a large part of the wholesale food business are such that individual action to improve efficiency by moving to another area is not the answer. If improvements are to be made, they must be made by the food wholesalers as a group.

It is apparent, therefore, that San Francisco needs a new wholesale food center where all types of food may be unloaded from rail cars and motortrucks into efficient buildings constructed to meet the needs of a modern distribution system. These buildings (most of which should be on 1 or $1\frac{1}{2}$ floors) should be so designed as to permit the use of proper handling equipment for moving products into, within, and out of them. They should be large enough for a dealer to handle all his supplies in one building with space for both refrigerated and common storage and for processing. Each store should have both a front and a rear entrance so that rail receipts can be unloaded on one side and trucks on the other. Streets between the buildings should be wide enough for trucks to back up to the platforms and still leave enough room in the center for traffic to move freely. The new food center should have parking areas for thousands of trucks and automobiles.

In a food center, buyers should be able to obtain quickly the complete lines of food handled in retail grocery stores. From such a center, arterial streets should radiate to all parts of the city and the surrounding territory. Offices, banks, restaurants, and other facilities needed by the food industry should be provided.

In planning such a food center, provision should be made for independent wholesalers of all types of food, chainstore warehouses, packer branch houses, processors, manufacturers' branch houses, and all other segments of the wholesale food industry. Here these firms could operate with utmost efficiency. Railroads and trucks could serve the food industry with greater ease and less expense. Out-of-town buyers in the fast growing surrounding area would find San Francisco a desirable place to buy food instead of a market to be avoided. The provision of such a center would ease or solve a number of problems facing the city government involving traffic, redevelopment, sanitation, fire regulations, and crime.

The kind of food district needed can be provided only by concerted action. It can be developed economically only by making a new start, in a new location and in a section of the city where sufficient land is available at reasonable cost for future growth.

FACILITIES PROPOSED

The first and most important consideration in preparing a master plan for a new and modern wholesale food center in San Francisco has been to correct the defects of present facilities so that food supplies moving through the new center may be assembled and distributed most efficiently. Under the limitations imposed by the characteristics of the selected site, all structures were designed to secure maximum utilization of labor and equipment in receiving and handling the food items to be distributed through the food center. Adequate space is provided around all buildings for efficient movement and parking of automobiles, trucks, and the spotting of rail cars.

Buildings are arranged, on the general plan, to house in the same area all wholesalers handling the same general type of food product. This will enable buyers to buy rapidly and conveniently without delays caused by the present scattering of the wholesale food business in various parts of the city. These commodity areas are arranged in a sequence whereby those buyers who usually need supplies of several groups of commodities will not have to travel far to obtain supplies of related items to fill their needs.

For example, it was found that many small retailers handling fruits and vegetables also sell poultry, eggs, and dairy products. These commodity areas are grouped immediately adjacent to each other in the redevelopment area between Jennings and Hawes Streets. Those buyers needing supplies of meats and meat products could then visit the meat section of the food center, which is placed immediately east of Hawes Street and extends to Fitch Street. The dry grocery section lies immediately south of the meat section along the proposed Hunters Point freeway, permitting buyers to pick up supplies of this nature and proceed conveniently to their stores in all parts of the city via the nearby freeways and major truck routes. To the extent possible, the buildings proposed to house individual groups of wholesalers were set up on the basis of similar engineering designs so as to present a uniform aspect for the food center.

A scale model of the proposed food center has been prepared. In the model (fig. 1), facilities have been planned for all wholesalers who are currently operating under conditions which would make it worthwhile for them to consider moving to a new area, or who said during the survey that they plan to move if new facilities are constructed in such a food center. On this model it will be seen that these wholesalers have been placed in two general types of facilities—multistore units (several stores in one building) for the smaller wholesalers and separate buildings for the larger firms. Each of these areas not only contains the buildings needed by wholesalers who may be interested immediately in operating in a new market, but also provides for the addition of more facilities in the future. Thus, each section has its own expansion area.

In general, the plan for the wholesale food center suggests an initial need for about 38 separate buildings. All buildings are designed so that, to the extent possible, any building which might not be used for the purpose for which it was built would be suitable for several other uses. Direct rail connections have been provided to all the buildings. Each building has both a front and rear entrance so that rail cars can be accommodated at one side and trucks at the other. Streets are sufficiently wide and parking areas have been located throughout the entire market area. All buildings are designed so that all products can be handled, moved, stored, or loaded and unloaded with the least amount of labor and expense.

Fruit and vegetable dealers are located in 6 buildings, the smaller row-type buildings being separated by market streets and a sewer easement. There are 2 row-type buildings proposed for use by general meat wholesalers. The 16 buildings suggested for occupancy by meat processors are similar or identical in proposed design; they are located in rows, with the individual buildings separated by expansion areas to suit the possible needs of the individual firms who may occupy them. Wholesale dealers in poultry, eggs, and dairy products would occupy 4 separate buildings, with dry grocery dealers in 3 buildings, packer branch houses in 3 buildings, and a motel in 1 building. There are 2 sheds for truckers. Space is provided for 1 restaurant in a separate structure and for 3 cafes in row-type buildings which could be devoted to other uses if the restaurants were not needed.

About 1,500 parking spaces are provided, and these should be adequate for present needs. Space for additional parking is provided in areas set aside for expansion. The principal streets are 150 feet wide and should be paved adequately to withstand heavy traffic loads. There is space for spotting approximately 125 freight cars on house tracks throughout the food center, and an additional 20 cars on the fruit and vegetable team track.

Space for 20 offices is provided on the 2nd floor of one fruit and vegetable sales building. These offices might be used by brokerage firms and other concerns related to the market, the food center management, a communications center, and inspection and market news services.

In addition to the facilities listed above an area is set aside for allied industries to take care of all other types of food handlers which may gravitate to the distribution center over a period of time, including manufacturers' branch houses, bakeries, and dealers in coffee, spices, candy, beverages, etc.



Figure 1.--Model of proposed wholesale food center for San Francisco, Calif.

It should be emphasized that these overall plans as shown by the model will undoubtedly change many times before the project is completed, because some of the land may not be available and conditions will change.

Before a site was chosen, members of a committee scientifically examined more than a dozen possible sites. The site selected in the South Basin-Hunters Point area consists of about 200 acres including the expansion area for allied food industries. The amount of space recommended for wholesalers who would occupy stores in the market is considerably less than they occupy in present facilities, because many of them now occupy buildings not designed for handling efficiency.

Facilities for Fruit and Vegetable Wholesalers

Facilities planned for fruit and vegetable wholesalers are designed to handle about 19,431 carlots. This volume represents the volume of the 73 wholesalers in the city of San Francisco, but excludes the 1,400 equivalent carlots distributed by chainstore organizations.

Fruit and vegetable buildings are 60 feet wide, wall to wall, with individual store units 22 feet and 6 inches by 60 feet. The rear platforms are 12 feet wide, 55 inches above top of rail; and the front platforms are 24 feet wide, 45 inches above the pavement. A continuous step 22 inches high runs along the front platform to accommodate small trucks and pedestrians. The front doors of the store units provide an opening 18 feet to 20 feet in width. The produce is delivered by rail cars or trailer trucks to the rear platforms and unloading is direct to each dealer's store.

Part of the width of the front platform is designed to be used by wholesalers for display and sales purposes; the remaining part is for common use of buyers and for delivery of produce direct to trucks. The platforms are fully covered with canopies; the canopy over the front platform extends 6 feet beyond the edge of the platform to act as a protection from the elements while unloading and loading. Special display floodlights are placed under the canopies.

Thus, this unit has an overall depth of 96 feet, of which 60 feet are enclosed. Store units are constructed side by side in one or more buildings. An individual dealer could take as many units as required for his operations. Hence, partitions between units are placed so as to provide each dealer with the space needed. The total length of a building is determined by the number of units required, space available in the market area, and the arrangement of all facilities on the market.

Space is provided in 6 buildings for 70 units. Each unit contains 1,350 square feet of first-floor enclosed space and 810 square feet of platform space. Space is available to construct 340 square feet of mezzanine space in each store unit. The 70 units would have 94,500 square feet of first-floor enclosed space, 56,700 square feet of platform space, 23,800 square feet of mezzanine space, or a total of 175,000 feet of operating space. In the plan

herein proposed, 40 units are grouped in 2 buildings of 20 units each, and 32 units, 30 of which are proposed to be used by fruit and vegetable dealers, are included in 4 buildings, each having 8 units. The two other units are proposed for use as cafe or restaurant space.

It is suggested that all offices be constructed on the mezzanine floor. When constructed at the rear of the stores with windows in the front, such offices afford a view of the sales floor and of deliveries without occupying valuable space on the main floor. To allow for the construction of mezzanine offices and provide adequate space underneath for walk-in coolers or ripening rooms, the height of the ceiling should be approximately 18 feet above the main floor. A clearance of 9 feet and 6 inches is maintained beneath the mezzanine floor. Air vents in the roof would be necessary to facilitate the circulation of air within the store, particularly in warm weather. Skylights may be necessary for adequate lighting.

Interiors of stores should be well lighted. Outside walls should contain a maximum amount of daylight sash. Glazed overhead-type doors 16 feet wide are provided at the front of stores together with a 4-foot swinging access door. The rear door also is of the overhead type, 8 feet wide. All outside doors are 8 feet high.

Each store should have its own toilet facilities. All store units should have 2 floor drains at least 8 feet off the center of the store and with floors pitched to the drains.

All stores should be heated by unit heaters suspended from the ceiling, with either gas or oil fuel.

The fruit and vegetable buildings should be designed as steel frame structures with foundations and footings of concrete. Exterior walls should be built to meet specifications of the city building code.

Interior columns should be kept to a minimum in order to provide maximum working space. Two interior lines of columns should be used on one-story buildings with mezzanines.

Partitions between stores should be semi-permanent to allow for modifications of store sizes in the future.

The floor slabs should not be trowelled to a finish so smooth as to create a danger of slipping. Floors in stores should be designed for a live load of 250 pounds per square foot, whereas mezzanine floors are designed for a live load of 75 pounds per square foot. Floors will be supported by structural steel beams generally, except that ground floors in buildings without basement could be of flat slab construction.

The roofing should be a 20-year bonded tar and gravel roofing applied over lightweight concrete channel tiles supported by exposed steel beams and girders. Roofs should be insulated.

Canopies over the rear platforms are cantilevered from the main structure and are similar in construction to the main roofs but uninsulated. The front canopies are supported by a steel post 4 feet from edge of front platform to reduce interference with loading and unloading of trucks.

Where subsoil requires it, all building foundations should be supported on wood piles cut off at the ground water level. The piles should be capped with concrete caps or spread footings which in turn will receive the supports for walls and floors.

A single railroad spur should be laid behind all of the stores parallel to the rear platforms. This will permit the unloading of rail cars onto the rear platforms and into the stores. It is thought that the relatively small amount of direct rail car receipts would require only a single track behind each store building. A rail car is about 45 feet long and would extend the width of 2 stores. Seldom would 2 dealers occupying single-unit, adjoining stores have rail cars at the same time. The street at the rear of the store should be paved level with the top of the rails so as to permit the loading or unloading of trucks whenever the platform is not occupied by railroad cars.

It is not recommended that coolers or other refrigeration equipment be provided in the store units by the agency building the food center because individual dealer requirements as to cooler and freezer space vary tremendously. Furthermore, there are some wholesalers who have equipment which could be transferred to new stores. A somewhat similar situation exists with regard to ripening rooms for bananas. Some wholesalers do not require this type of room; consequently, it should be the responsibility of each tenant to provide whatever ripening room facilities are required for his use.

Store units of the same type are suggested for all types of fruit and vegetable wholesalers. For specialty businesses, such as those of banana handlers and tomato repackers, a layout may be suggested for a specific volume of business, illustrating how the facilities should be arranged to obtain maximum utilization of floor space and the proper flow of the product through the store. The principles illustrated in the layouts would, in general, be the same for businesses doing a large or small volume. However, businesses doing very large volumes would have to make alterations in the specifications to fit their specific needs.

Facilities for Poultry, Egg, and Dairy Product Wholesalers

The volume of poultry and egg and dairy business which the food center would eventually handle was estimated at 5,526 equivalent carlots, so facilities are planned to handle this volume. Of this amount, 3,475 cars were largely live and dressed poultry. This represents the entire amount of these items handled by the 15 wholesalers in the city.

In most of these establishments the equipment and buildings are outmoded and unsanitary. To overcome these situations the California State Legislature in 1955 passed 3 bills (Assembly Bill 1993 and Senate Bills 1633 and 1555) which were approved by the Governor. Their provisions become mandatory on July 1, 1956. The legislation provides that all poultry sold in the State be "wholesome"

and sold as eviscerated poultry only. It makes it illegal to process poultry or sell at wholesale unless the dealer has secured a State license. All plans and specifications of any intended construction or renovation must be submitted to the Director of the California Department of Agriculture for approval. It places the policing of the poultry processing industry in the hands of the State food inspectors and provides fines for failure to comply with the provisions of the statutes.

The provisions of these acts will place most poultry processors and wholesalers in a position where extensive renovation or abandonment of present facilities will be necessary. It would seem that all facilities for processing poultry should be moved to the proposed modern food center and, therefore, facilities to handle the entire receipts in San Francisco should be provided. Three of the larger poultry, egg, and dairy wholesalers indicated during the survey that their needs for space, if they moved to a new food center, would be larger than they are occupying at this time, due to the nature of the specialties they are handling. This, in part, allows for the apparently large requirement for space for the poultry, egg, and dairy product section of the food center.

One proposed structure contains 8 store units for poultry, egg, and dairy wholesalers. Each unit is $22\frac{1}{2}$ feet wide by 70 feet deep with a 14-foot covered platform in front and a 12-foot covered platform in the rear, giving an overall depth of 96 feet. An 18-foot ceiling height is suggested. Overall dimensions of individual units in this building are similar to those proposed for fruit and vegetable stores except that the enclosed space is 70 feet deep instead of 60, with a 14-foot platform in front instead of 24 feet. Removable partitions should be provided between units for the benefit of dealers who may need two or more units. A continuous step 22 inches high should run along the front platform to accommodate small trucks and pedestrians. Since these wholesalers do not receive any appreciable amount of their supplies by rail, both platforms are designed for receiving and shipping by motortrucks. Because of the wide variation in requirements of individual wholesalers for cooler and freezer space, it is recommended that such units be provided by the wholesalers themselves rather than by the market.

Individual buildings suggested for 3 independent poultry and dairy product processors and wholesalers will provide approximately 118,000 square feet of space. The design and layout of these buildings would be the responsibility of the individual firm, but the stores should be built to meet all construction requirements of the U. S. Public Health Administration, the Federal Inspection Service, State and city sanitation departments, and city building codes; and to conform to the master plan for the market.

Facilities for Meat Wholesalers

Facilities are planned for meat wholesalers and processors whose estimated volume in 1954 was about 5,697 carlots. This is based on present needs as expressed by the meat wholesalers and indicated by a survey of present facilities.

Space designed for use by general meat wholesalers is in 2 structures with overall dimensions of 86 by 320 feet each, with second floor space 40 by 320 feet each. The ground floor of each unit is 22.5 feet wide and 60 feet deep with a 14-foot covered platform in front and a 12-foot covered platform at the rear. The unit has an overall depth of 86 feet of which 60 feet would be enclosed. The second floor space is 22.5 feet wide and 40 feet deep per unit. Construction of units according to this plan would give continuous platforms and floors on the same level. Two meat rails should be constructed above both the front and rear platforms. These rails should run the full length of the platforms and have crossovers in front of each store so that meat can be unloaded at any point on the platforms and rolled into the stores. These rails also provide an excellent method for transporting meats between wholesalers.

The rear platforms should be at rail car floor level, or about 55 inches in height, while the front platforms should be about 45 inches in height. A continuous step 22 inches high should run along the front of the front platform so that pedestrians can step onto the platform at any point.

The second-floor space could be used for dry storage, refrigeration equipment, locker rooms, toilets, and offices. The second-floor space also includes a 7-foot continuous corridor the full length of the building so that materials for dry storage could be moved freely into any unit. An elevator shaft could be located at the end of each corridor.

Buildings suggested as being suitable for use by 8 large-scale meat processors have a depth of 150 feet overall. Such buildings vary from 480 feet to 95 feet in length according to the needs of the individual occupants. The total length of all buildings proposed to be used by these processors is 1,056 feet. Second-floor space constructed over 50 feet of the 150-foot depth is proposed. Rail tracks are at the rear of all buildings. Front platforms 14 feet wide and rear platforms 12 feet wide are suggested, with the height of 45 inches in front for trucks and 55 inches in the rear for rail car unloading. The total operating space in all buildings proposed for the large-scale meat processing firms is 158,400 square feet on the first floor and 52,800 square feet of second-floor space. Land area is available adjacent to the buildings for future expansion.

Structures suitable for use by 6 smaller-scale meat wholesalers have a depth of 100 feet and are proposed to be constructed in lengths varying from 250 feet to 50 feet according to the needs of the individual firms. Except for the 50-foot decrease in depth, these structures are similar to those provided for the large-scale meat processors, with platforms of the same width, and rail connections. The second floor space covers 50 feet of the 100-foot depth of the building. These structures have a combined length of 835 feet, and contain approximately 83,500 square feet of first-floor space and 41,750 square feet of second-floor space.

Facilities for Dry Grocery Wholesalers

Facilities are suggested in detached buildings for 3 dry grocery wholesalers who handled about 6,400 equivalent carlots in 1954. These buildings contain about 137,000 square feet of space. The design and the plans of these structures

would be developed by the individual firms which would occupy the facilities. However, all detached structures erected on the food center should conform to the standards which would be established by the proper food center authorities.

Team Tracks

In the fruit and vegetable section, team track space is needed for (1) deliveries made direct from cars on team tracks to the trucks of buyers and delivery trucks, (2) additional track capacity during peak seasons, (3) some less-than-carlot receivers where several participate in the contents of a car, and (4) consignees who do not have stores in the market. One team track is provided parallel to the house tracks and separated from them by an 80-foot street. It has a capacity of 20 cars. This capacity is based on estimates of needs by local railroad officials.

Other Facilities and Services

There are other facilities which should be provided in a market area to meet the needs of the trade groups and their patrons. The market should have ample parking areas adjacent to all of the stores and stalls mentioned previously. The 1,500 parking spaces provided should be adequate to meet present needs. Additional parking spaces will be provided in expansion area for each dealer's facilities as they are developed. The principal market streets should be at least 150 feet wide and properly paved to withstand heavy traffic loads. Wide streets are necessary to provide adequate parking space for trailer trucks at loading platforms and to allow a flow of traffic without congestion.

Space for 20 offices is provided on the second floor of one wholesale fruit and vegetable sales building. Brokerage firms and other firms related to the market, the market management, communication center, and inspection and market news offices are possible users of these offices.

Provision has been made in the master plan for 4 restaurants and cafes, barber shops, and public toilet facilities. A truck service garage with gasoline and repair facilities is recommended.

Consideration should be given to construction of a motel on Carroll Avenue near the proposed Hunters Point expressway. These facilities would be of considerable benefit to many market patrons. Two truckers' sheds are provided which would facilitate direct transfer of long-haul perishable shipments to local trucks when shipments for more than one consignee are included in the load; and for reloading trucks with return loads. Facilities should also be provided for auxiliary market services such as used crate and package handlers, food processing facilities, etc.

Public transportation is provided at present along Third Street which is several blocks west of the proposed food center site. It is assumed that this type of transportation would be extended to service adequately the proposed wholesale food center.

Space for Expansion

Perhaps one of the greatest shortcomings of wholesale markets throughout the country is the lack of space for market expansion. All too frequently little consideration has been given to the need for expansion of many of our present day markets. As a result, many market areas are congested and the rentals of properties are frequently out of proportion to their true value. It is essential at the outset to give consideration not only to present needs of the market but also to future needs. Within each of the respective areas to be used by wholesalers, are included expansion areas for constructing new facilities and parking areas around them.

An expansion area is suggested for allied industries such as frozen foods, imported groceries, public refrigerated warehouses, equipment, supplies, etc., directly south of the site of the food center.

To assure adequate space for the initial construction, for probable expansion of the initial lessees and for allied industries, it appears that a site containing approximately 200 acres is not too large.

The arrangement of the facilities needed now should be planned with a view toward an orderly development of the overall market area in the future. Additional facilities should be provided for wholesale food industries as the need arises.

The facilities discussed above have been laid out on the basis of the space in the South Basin-Hunters Point site. A photograph of this arrangement, using a scale model, is shown in this report.

Selection of a Site

In selecting a site for the wholesale food center several factors were considered: (1) Accessibility to incoming and outgoing transportation, (2) shortest average time and distance to buyers, (3) sufficient area at reasonable cost to permit preparation of an efficient layout as well as allow for adequate future expansion, and (4) a location which will avoid nonmarket traffic.

In the course of this study 8 possible sites were examined. Most of these sites were either too small or not located advantageously. The Hunters Point-South Basin site selected satisfies, to a reasonable extent, most of several factors enumerated above. The most serious defect of that site is the relatively high value of land. If the entire development is to be self-supporting, the rental revenue derived from the use of the facilities must pay the relatively high amortization costs of the land. The effects of the relatively high land values upon rental rates are pointed out later.

The site selected is bounded on the north by Thomas Street and Crisp Road; on the east by Fitch Street and the proposed Hunters Point expressway; on the south by Carroll Avenue; and on the west by Jennings Street, with the exception of 3 blocks containing the truckers sheds and processors buildings which lie immediately west of Jennings Street. An expansion area for allied industries is south of Carroll Avenue, and is bounded on the west by Jennings Street, the east by Fitch Street and Hunters Point expressway and the south by Gilman Avenue.

COST OF DEVELOPING PROPOSED FACILITIES

In estimating the costs involved in the development of the proposed San Francisco Wholesale Food Center, it was recognized that part of the facilities likely would be financed and constructed by an overall food center development organization, and the remainder would be constructed by individual corporations on land leased or bought from the overall food center organization. The following estimated costs of developing the proposed facilities are considered in these two categories. It should be pointed out that on estimates given below, no costs are included for (1) buildings shown in each commodity section and marked on the market model as "expansion," and (2) the area, buildings, and land marked as "expansion for allied industries" south of Carroll Avenue. However, the cost of land for expansion within each commodity area is included in cost estimates.

Land

The cost of land on which the proposed food center is to be developed (including the cost of placing the land in condition for construction, fill, piling, etc. and the cost of removal of buildings that may be on the site) will have a direct influence on the cost of the project and on the amount of rental income necessary to amortize the investment. It has already been shown that approximating 112 acres would be required for a wholesale food center not including about 88 additional acres for expansion by allied industries.

Due to the extreme limitation of available land in San Francisco for industrial and commercial developments, much consideration was given to this point. Informal appraisals of land value for the South Basin-Hunters Point site gave an estimated cost of \$1.25 per square foot or \$54,450 per acre, a high land value for any wholesale food center project.

City sewers and water lines are already available on part of the site and it is expected that these public utilities will be extended by the city to undeveloped areas as they are needed.

Total cost of land including expansion areas within each commodity section but not including cost of land for expansion area for allied industries would approximate \$6,086,421, based on presently available informal appraisals for the South Basin-Hunters Point site.

Facilities Which Probably will be Financed and Constructed by a Market Corporation

The following estimated costs are those which are likely to be borne by a market corporation rather than by private corporations building their own individual warehouses, such as packer branch houses, dry grocery wholesalers, etc.

These costs of structures and facilities are based upon costs of brick and steel construction in the San Francisco area as of 1955. The estimates are not

to replace firm estimates made by local architects and contractors, and are to be used only in estimating probable costs of the facilities for purposes of this report. The specific facilities suggested are those described earlier, and shown on the proposed market layout. Under "facilities" are included all the costs of structures, paving, railroad tracks, sewers, and other physical installations necessary for the development of a particular project in the entire market proposal. The sequence of project costs assumes that the whole-sale facilities for fruit and vegetable dealers will probably be of first priority in development, and that other facilities will be constructed later.

These costs are based on interest rates and other factors consistent with private enterprise. No allowance or possible subsidies from public sources are assumed to be available to help defray the costs. In the future development of the individual projects, if it were found that certain subsidies with respect to taxes, land values, amortization, etc. would be available, such measures would be only a shifting of the payment of costs and would not affect the total costs.

Facilities for Fruit and Vegetable Wholesalers

Cost of facilities

70 store units @ \$15,000	\$ 1,050,000
Second floor space over part one building (60' x 112.5' x 10' - 67,500 cu. ft. @ \$0.90	60,750
Rail tracks, sewers, paving, fencing, etc.	200,824
Architects and engineering fees @ 6 percent	78,694
Total cost, facilities	<u>1,390,268</u>

Cost of land

Including land for future expansion, a total of
33.42 acres are allotted for this part of the market.
33.42 acres @ \$54,450

1,819,719

TOTAL COST, facilities and land \$ 3,209,987

Facilities for Poultry, Eggs, and Dairy Product Wholesalers

Cost of facilities

1 structure 96' x 180' - 8 units @ \$15,000	\$ 120,000
3 structures - 225' x 150' - 33,750 sq. ft. @ \$7.00	236,250
-- 200' x 200' - 40,000 sq. ft. @ \$7.00	280,000
-- 220' x 200' - 44,000 sq. ft. @ \$7.00	308,000
Rail tracks, sewers, paving	89,989
Engineering fees @ 6 percent	62,054
Total cost, facilities	<u>\$ 1,096,293</u>

Cost of land

8.91 acres @ \$54,450 per acre

485,150

TOTAL COST, facilities and land \$ 1,581,443

Facilities for Meat Wholesalers and Processors

Cost of facilities

1 structure 86' x 640' - 55,040 sq. ft. @ \$6.75	\$ 371,520
second floor space - 40' x 640' x 10' -	
256,000 cu. ft. @ \$0.50	128,000
8 structures 150' x 1,056' overall -	
158,400 sq. ft. @ \$6.75	1,069,200
second floor space 50' x 1,056' x 10' -	
528,000 cu. ft. @ \$0.50	264,000
6 structures 100' x 835' overall - 83,500 sq. ft. @ \$6.75	563,525
second floor space 50' x 835' x 10' -	
417,000 cu. ft. @ \$0.50	208,195
Engineering fees @ 6 percent	<u>173,177</u>
Total cost, facilities	\$ 3,059,467

Cost of land

34.03 acres @ \$54,450	\$ <u>1,852,933</u>
TOTAL COST, facilities and land	\$ 4,912,400

Cafes and Restaurants

Cost of facilities

4 units 22½' x 96' - 8,640 sq. ft. @ \$7.00	\$ 60,480
Sewers, paving	6,260
Engineering fees @ 6 percent	<u>4,004</u>
Total cost, facilities	\$ 70,744

Cost of land

0.5 acres @ \$54,450 per acre	<u>27,225</u>
TOTAL COST, facilities and land	\$ 97,969

Trucker Sheds

Cost of facilities

2 sheds - each 25' x 400' - 20,000 sq. ft. @ \$1.50	\$ 30,000
Sewers, paving	37,800
Engineering fees @ 6 percent	<u>4,068</u>
Total cost, facilities	71,868

Cost of land

5.06 acres @ \$54,450 per acre	<u>275,517</u>
TOTAL COST, facilities and land	\$ 347,385

Facilities Which Might be Financed, Constructed, and
Operated by Individual Private Corporations

Certain facilities which could be included within a modern wholesale food center would probably be planned, financed, constructed, and operated by the individual firms engaging in the respective lines of business. The facility requirements of individual operators of these enterprises are distinct and varied. Experience indicates that in food center developments in other cities, the operators of these wholesale enterprises design, construct, and equip their facilities each to fit his particular needs for his specific business. Certain of the enterprises, such as packer branch houses would have large investments in equipment, machinery, coolers, and freezers to carry on their lines of business.

With respect to the development of this group of facilities, the requirements as to location within the overall planned area, together with certain possible requirements concerning type of construction conforming to the overall plan could be prescribed by the food center development organization. The development organization would make the land area available, consistent with the overall plan, and could enter into a lease or purchase contract for the land needed. The food center development organization would probably have no responsibility in the financing, construction, and operation of these facilities. When equitable arrangements concerned with the transfer of land are completed, the responsibility of the market development organization would cease.

Facilities for Dry Groceries

Cost of facilities

1 structure 250' x 360' - 90,000 sq. ft. @ \$6.75	\$ 607,500
1 " 160' x 200' - 32,000 sq. ft. @ \$6.75	216,000
1 " 100' x 150' - 15,000 sq. ft. @ \$6.75	101,250
Rail tracks, sewers, paving	79,378
Engineering fees @ 6 percent	60,248
Total, facilities	\$ 1,064,376

Cost of land

9.44 acres @ \$54,450	514,008
TOTAL COST, facilities and land	1,578,384

Facilities for Packer Branch Houses

Cost of facilities

1 structure 200' x 300' - 60,000 sq. ft. @ \$7.00	420,000
1 " 200' x 200' - 40,000 sq. ft. @ \$7.00	280,000
1 " 200' x 350' - 70,000 sq. ft. @ \$7.00	490,000
Rail tracks, sewers, paving	77,822
Engineering fees @ 6 percent	76,069
Total, facilities	\$ 1,343,891

Cost of land

15.9 acres @ \$54,450	865,755
TOTAL COST, facilities and land	\$ 2,209,646

Facilities for General Processors

Cost of facilities

1 structure 100' x 220' - 22,000 sq. ft. @ \$6.75	\$	148,500
Sewers, paving		16,090
Engineering fees @ 6 percent		<u>9,890</u>
Total, facilities	\$	174,480

Cost of land

1.72 acres @ \$54,450		<u>93,654</u>
TOTAL COST, facilities and land	\$	268,134

Garage and Service Station

Cost of facilities

Structure 100' x 150' - 15,000 sq. ft. @ \$6.00	\$	90,000
Sewers, paving		13,015
Engineering fees @ 6 percent		<u>6,181</u>
Total, facilities	\$	109,196

Cost of land

2 acres @ \$54,450		<u>108,900</u>
TOTAL COST, facilities and land	\$	218,096

Motel

Cost of facilities

1 structure - 11 units each 20' x 30' x 10' - 67,500 cu. ft. @ \$0.75	\$	50,625
Sewers, paving		3,883
Engineering fees @ 6 percent		<u>3,270</u>
Total, facilities	\$	57,778

Cost of land

0.8 acre @ \$54,450		<u>43,560</u>
TOTAL COST, facilities and land	\$	101,338

Combined Cost of Food Center Development

1. For those facilities likely to be planned, financed, constructed, and operated by market corporation.

Cost of facilities

<u>29 buildings</u>	- 765,220 sq. ft.	\$ 4,750,575
<u>Rail tracks</u>	- 7,990 ft. @ \$3.50 plus 11 switches @ \$1,250	81,665
<u>Sewers</u>	- Sanitary 8,280 ft. @ \$1.90 - \$15,732	
	Storm 11,630 ft. @ \$3.50 - <u>40,705</u>	56,437
<u>Paving</u>	- 183,107 sq. yd. @ \$2.50	457,767
<u>Fencing</u>	- 4,400 ft. @ \$3.50	15,400
<u>Floodlights</u>	- 26 @ \$150	3,900
<u>P.A. systems</u>	- 1 @ \$900	900
<u>Engineering fees</u>	- @ 6 percent of facilities cost	<u>321,996</u>
TOTAL		\$ 5,688,640

Cost of land

81.92 acres (including expansion areas) @ \$54,450 per acre	<u>4,460,544</u>
TOTAL COST, facilities and land	\$ 10,149,184

2. For those facilities likely to be planned, financed, constructed, and operated by individual private firms.

The food center organization would provide 29.86 acres of land upon which private corporations and individual firms would plan, finance, construct their own facilities. This 29.86 acres of land would be sufficient for dry grocery warehouses, meat packer branch houses, general processors, a garage and service station, and a motel. At \$54,450 per acre, this land would have a value of \$1,625,877. The construction of the facilities on this land would not enter into the financial transactions of the food center organization.

3. Total cost.

The total cost of land and planned facilities, which could be a responsibility of the food center organization would be 111.78 acres of land valued at \$6,086,421, and facilities at a cost of \$5,688,640, a total of \$11,775,061.

INCOME REQUIRED TO SUPPORT THE INVESTMENT OF LAND AND FACILITIES

Costs such as personal services, taxes, insurance, etc.; amortization costs and other costs directly attributable to support the investment in land and facilities must be paid by the users of the food center facilities. From these costs, it is possible to estimate the rental charges per year for each part of the facility. The following is a list of these costs of the food center on an annual basis.

Direct Management Costs

It is assumed that expenses for personal services, office expenses, travel and per diem, telephone and telegraph etc., could be paid by the market and would not materially increase when once established as additional facilities are added. However, it should be pointed out that these costs will have to be borne by the original lessees on the market and should be prorated back to the direct users. The following are estimates of such costs based on a recent study, 1/ of expenses in similar markets throughout the country:

Personal services:

Manager	\$ 12,000
Bookkeeper	3,900
Secretary	2,800
Switchboard operator	2,600
2 policemen	8,000
Janitor	<u>2,400</u>

Total \$ 31,700

Travel and per diem	1,700
Advertising and promotion	1,200
Office supplies	1,000
Telephone and telegraph	500
Legal and auditing	1,400
Utilities	3,300
Street cleaning	<u>12,000</u>

Grand Total \$ 52,800

Maintenance and Repair

The amount of money to be spent on maintenance and repair is determined by a number of factors, the most important being the type of construction, the age of the buildings, and of course, the size of the market. Maintenance and repair costs were estimated to be one-half of one percent of cost of construction per year or \$28,443.

1/ Larson, J. Stanford - Wholesale Produce Markets, Management, Operating Expenses and Income. Marketing Research Report No. 91, U. S. Dept. of Agriculture April 1955.

Insurance

Included under this classification are premiums to cover damage to buildings by fire and windstorm, etc. Most markets carry an amount equal to 80 to 100 percent of replacement value. The rates for fire insurance vary widely--and in the case of the San Francisco Food Center--it is estimated to be at 80 percent of value of buildings @ \$1.25 per \$1,000 or \$5,689 per year.

Real Estate Taxes

Real estate taxes are based on a rate of \$3.00 per \$100 actual value. On estimated cost of land and facilities the annual real estate taxes are computed to be \$304,476.

Amortization

The length of the period over which the investment in a wholesale market might be amortized should be determined by the useful life of the facilities. Observation of a number of markets indicate that such facilities should not become obsolete in less than 20 to 30 years. Moreover, the terms of most agencies making loans for capital improvements of this type, indicate that it is a sound business practice to repay such loans over a 20-30 year period. In this instance it is assumed that the loans will be repaid over a 25 year period and it will be necessary to pay $4\frac{1}{2}$ percent interest on the investment.

The annual amortization charges are estimated to be as follows:

Facilities	\$ 383,642
Land (81.92 acres)	<u>300,819</u>
	\$ 684,461

Annual Operating Expenses

Total operating expenses to be paid each year by the users of the new food center to support the investment in land and facilities are estimated as follows:

Total yearly charges for those facilities likely to be planned, financed, constructed and operated by food center organization

- | | |
|--|----------------|
| 1. Direct management costs including administrative and office expense | \$ 52,800 |
| 2. Maintenance and repairs ($\frac{1}{2}$ % of value facilities) | 28,443 |
| 3. Insurance (80% of value of facilities @ \$1.25 per \$1,000) | 5,689 |
| 4. Real estate taxes (\$3.00 per \$100 value) | 304,476 |
| 5. Amortization - facilities | 383,642 |
| 6. Amortization - land (81.92 acres) | <u>300,819</u> |

\$ 1,075,869

Contingency Reserve

To meet unexpected emergencies, it is recommended that the food center management arrange to include an item of contingency reserve in their annual operating expense sheet. From recent studies it is estimated that a charge of 10 percent should be sufficient to underwrite most emergencies not covered by other types of insurance. It would approximate \$107,587 per year.

Total Charges per year

A total of \$1,183,456 annual charges will be necessary therefore to support the investment in land and facilities and operate the new food center.

Sources of Income

The largest and most important source of income in all terminal markets has been rentals on buildings. Other items of income may be established as the food center becomes established but for purposes of this report, the annual charges were apportioned to the various commodity sections by square foot of space or store units to be occupied. There is a total area planned in the new facilities of 765,230 square feet, which when the annual charges are apportioned gives an estimated annual rental charge of \$1.55 per square foot. The following gives a listing of rental charges for each of the types of facilities to be planned, erected and operated by the market corporation.

Rents to be paid by:

Fruit and vegetable wholesalers (70 units)

Each unit 2,160 sq. ft. operating space plus 340 mezzanine = 2,500 sq. ft.	
2,500 sq. ft. @ \$1.55 per sq. ft. - \$3,875 per unit,	
\$323 per month	\$ 271,250
Second floor office space - 6,750 sq. ft. @ \$1.55	10,463

Poultry, egg, and dairy product wholesalers

135,030 sq. ft. of space @ \$1.55	209,297
2,720 sq. ft. mezzanine	4,217

Meat wholesalers and processors

417,090 sq. ft. @ \$1.55	646,490
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Cafes and restaurants

8,640 sq. ft. @ \$1.55 - 4 units @ \$3,348 - \$279 per month per unit	13,392
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Trucker sheds

20,000 sq. ft. @ \$1.55	<u>31,000</u>
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1/ \$ 1,186,103

1/ \$2,652 excess payment due to rounding calculated rental to \$1.55 per sq. ft.

The cost of the 29.86 acres of land upon which facilities may be financed, constructed and operated by individual private firms would be \$1,625,877. Until this land is transferred to the respective firms under appropriate purchase or lease agreements, the cost of holding this land would be a charge against the food center organization. If $3\frac{1}{2}$ percent interest were charged against this land investment, the yearly expense to the food center organization would be \$56,906. To cover this expense the annual rental per square foot in all facilities would be increased about 7.5 cents per square foot. If real estate taxes are paid on the value of this land, such taxes would be \$43,776 per year. This increase in food center expenses would require an increase of about 6.5 cents per square foot in all facilities to give revenue to offset such expenses.

BY WHOM SHOULD THE FOOD CENTER BE BUILT AND MANAGED

A wholesale food center can be built and managed by (1) a public benefit corporation sometimes called a market authority; (2) a governmental agency; (3) a private nonprofit or limited profit corporation; or (4) a private corporation for profit.

Public Benefit Corporation

A public benefit corporation or market authority is one created by legislative action. This type of corporation has many desirable features. Some of these features are: (1) It permits all interested groups of people to participate in building, financing, and managing the food center; (2) it is a nonprofit corporation, and the revenue derived cannot exceed the amounts needed to pay the costs of operation, amortize the investment, and maintain a limited reserve for contingencies; (3) it gives representation on the board of directors to governmental agencies interested in the market, consumers, dealers, and others; (4) it establishes a continuing organization; (5) it does not place a burden on taxpayers, but must pay its own way; and (6) it makes possible the use of eminent domain in acquiring a site.

Governmental Agency

Some markets have been financed, built, and managed by a State, city, or other governmental agency. A number of cities operate public wholesale and retail market places. There is a tendency, however, in recent years for public agencies to finance, build, and manage such a project only after all other methods of development have been ineffective. Markets operated currently by public agencies have usually been inherited from a start made many years ago when no other effective methods were available to establish market places. The Farmers Market on Alemany Boulevard is a city-owned and operated retail market and should not be confused with municipal or State wholesale markets in other cities.

Private Nonprofit Corporation

A private nonprofit or limited profit corporation could be created to construct, finance, and manage the wholesale food center in San Francisco. This type of corporation should have the following features: (1) All interested

groups operating in the market should be represented on the board of directors; (2) profits of the corporation owning the facility should be limited to a fixed amount or eliminated entirely; (3) a continuing organization should be provided; (4) ownership of the corporation should always be retained by operators in the market; and (5) if possible, representation of the city or State should be permitted on the board of directors.

Private Corporation
(Operated for Profit)

Many markets have been financed, constructed, and managed by private firms for profit. Usually the board of directors and management of such corporations are not wholesale dealers and handlers, and the demands for profit in the project may tend to submerge the primary motive of service to dealers and handlers and other people using the market. The management may turn out to be in the interest of the owners and not in the interest of the tenants and other users, and the basic intent of having a market operate in the interest of the community may be nullified.

Food Center Organization Suggested for San Francisco

From the needs in overall food center development in San Francisco, it seems apparent that there could be 3 types of organizations to do the work necessary to design, finance, construct, and operate the proposed food center in the city. (1) An overall development organization to plan, promote, and develop the entire food center. This development organization would have the legal right to acquire, sell, or lease land and plan, finance, and construct those facilities needed in a food center which are not likely to be constructed by individual firms. However, the food center overall corporation could make land available according to a master plan upon which separate commodity corporations or individual business establishments may plan, finance, and construct their own facilities. (2) Separate corporations concerned with facilities for individual types of produce such as (a) fruits and vegetables, (b) poultry, eggs, and dairy products, and (c) meats and meat products. It would not be feasible or practical to expect an association or corporation of one commodity group to assume the job of overall food center promotion and development. It may be possible that dealers in poultry, eggs, dairy products, and dealers in meat and meat products, like the fruit and vegetable dealers, would wish to form their own corporations, for the development of facilities suitable to their respective needs. (3) Individual businesses which could lease or buy land from the food center corporation and build their own facilities.

If the first approach is followed, the overall development organization would have responsibility for the food center development. It would work with the commodity sub-corporations organized by the respective types of food groups and individual businesses of allied food industries. It would sell or lease land to private corporations or business firms wishing to locate within the area who would design, finance, construct and operate their own private facilities. It is possible that the wholesale dealers in certain commodity groups of such as meats and meat products may not see fit to incorporate or otherwise organize, finance, and build their own facilities. In that event, it would be a proper

function of the food center development organization to design, finance, and construct appropriate facilities for such a group after firm leasing agreements are signed with responsible tenants for the long-time use of such facilities. It is probable that facilities for restaurants, cafes, and perhaps trucker sheds would be constructed by the food center development organization.

ESTIMATE OF POTENTIAL SAVINGS A MODERN FOOD CENTER WOULD BRING

The principal justification for constructing a new wholesale food center in San Francisco is that such a change would cut costs through increased marketing efficiency. For this reason, the first test that should be applied to this proposal is just how much would it reduce marketing and other related costs. An effort was made during the survey to determine how the costs of marketing in a new modern food center would compare with present costs of marketing food in San Francisco. Estimates have been made, therefore, of some potential savings that might be effected by establishing a new food center. There are many other items for which savings were not estimated.

Some Measurable Savings

Savings in Cartage, Portage, and Internal Handling

One of the greatest savings in a new and modern food center would be from increased labor efficiency in cartage, portage, and internal handling costs. Part of the products brought into a wholesale establishment are carted by private or public drayage from railroad team track to wholesalers' establishments. The largest proportion of total receipts, however, is delivered by truck direct to the consignee's place of business and moved into the store, displayed, sold, and moved from the store to the buyer's truck. In a modern food center, rail shipments could be delivered directly by "spotting" the car at the rear platform of the wholesale store. Truck receipts would also be received directly at the store with a truckbed height platform. Products received in boxes or cartons could be loaded on skids or pallets in the car or truck or on the platform, and then moved into the store rapidly and economically. Carcass meats could be placed on overhead rails at the edge of the platform and moved into coolers with a minimum of labor. Loose products such as watermelons, squash, and pork cuts likewise could be loaded into 4-wheel trucks and transported to display platforms, coolers, or processing rooms with minimum labor requirements.

Estimated savings in new modern facilities for 37,458 equivalent carlots received by truck in 1954 for the 4 commodity groups studied ranged from \$37.28 per car for dry groceries to \$45.20 per car for fruits and vegetables, or a total of \$1,500,000. Estimated savings for 5,992 equivalent carlots only, received by rail and subject to cartage charges in addition to portage and internal handling costs, ranged from \$80.59 per car for fruits and vegetables to \$99.28 per car for dry groceries. Savings for rail receipts were estimated to be \$511,963. Therefore, total savings possible in cartage, portage, and internal handling are \$2,082,387 over present estimated cartage, portage, and internal handling costs, table 2.

Savings in Spoilage, Deterioration, Breakage, and Shrinkage

Refrigeration facilities in most wholesale stores currently being used in San Francisco are old and in poor condition. In many other facilities refrigerators are lacking entirely. Many refrigerators in dealers' stores do not have thermostatic controls to allow maintenance of optimum temperatures and many coolers are very damp, particularly those in locations where ventilation is not possible and drainage is inadequate.

In addition to the spoilage and deterioration caused by inadequate and inefficient refrigeration, a relatively significant loss results from present handling methods. Crates and boxes are dropped carelessly to the street or sidewalk where unloaded from incoming trucks and they may be handled very roughly in stacking in stores, piling, and storage before sales and then again in loading to buyers' trucks. Perishable items are bruised or cut by the rough handling permitting early decay and deterioration. Modern facilities with proper supervision of labor would eliminate unnecessary loss in quality in many of these operations.

Shrinkage is an important loss item in some very perishable commodities which may be held for relatively long periods of time, either on the sidewalks or streets where they were stacked on delivery due to lack of space in stores, or while still in trucks tied up for long periods in traffic jams.

Breakage and pilferage may also be extremely costly to receivers since it is usually impossible adequately to protect shipments under present conditions.

Estimates of partial costs from spoilage, deterioration, breakage, and pilferage were determined during the study from many of the wholesalers and compared with costs in similar situations where food items are handled in modern facilities. The potential savings for these items in 3 of the commodities studied was estimated to be \$783,466 as shown in table 3.

Table 3.—Estimated present costs from spoilage, deterioration, breakage, and shrinkage by commodity, estimated cost in proposed food center and estimated potential savings from operation in new food center

Commodity	:	:	:	:
	:	Present	Estimated	Estimated
	:	costs	costs in	savings
	:	:	proposed	:
	:	:	food center:	:
	:	Dollars	Dollars	Dollars
Fresh fruits and vegetables.....	:	660,654	165,164	495,490
Poultry, eggs, and dairy products.....	:	348,138	174,069	174,069
Meat.....	:	113,907	-	113,907
Total.....	:	1,122,699	339,233	783,466

Savings from Rent

Any savings from rent would be based upon a comparison between the cost of rent paid or rental value of present facilities with what the wholesaler would pay when he is located in the new market. For example, the annual rental paid by independent fruit and vegetable dealers in the Washington Street produce market area ranges from \$3.33 per square foot to \$0.37 per square foot or an average of \$1.06 per square foot. In the new facilities rental charges are estimated to be \$1.55 per square foot for facilities for fruit and vegetable, poultry, egg, and dairy products, and meat and meat products. Rentals for dry grocery facilities would be considerably less. Table 4 shows for each of the 4 commodity groups, the rents paid or rental values of present facilities, compared with the estimated rents to be paid in the new facilities. Only in meat and meat products are the rents to be paid in the new facilities greater than present total rents paid by each of the other 3 commodity groups.

Table 4.—Rents paid and rental value of present property compared with estimated rentals to be paid in new food center and resulting savings

Commodity group	Reported rent paid or rental value of present facilities Dollars	Estimated rentals to be paid in new food center Dollars	Estimated saving + or - Dollars
Fresh fruits and vegetables...	390,376	281,712	108,664
Poultry, eggs, and dairy products.....	229,601	213,512	16,089
Meat and meat products.....	535,603	646,489	-110,886
Dry groceries.....	202,345	106,860	95,485
Total.....	1,357,925	1,248,573	109,352

Savings in Truck and Labor Time

The lack of street space in which to get the daily supplies of food into a market facility, displayed, delivered to the buyer, and trucked away by them has long been recognized as one of the serious handicaps confronting dealers, truckers, and buyers operating in the market district. During the major trading hours, the traffic situation is very serious in San Francisco, causing many inconveniences and costly delays.

Traffic counts and time studies were made during the busy early morning hours of Friday, July 15, and Monday, July 18, 1955 by members of the survey team. In addition the Traffic Section of the City Bureau of Engineering set up automatic traffic count machines in the vicinity of the Washington Street wholesale produce district to assist in determining traffic loads at these points. The average time for a truck to enter the Washington Street produce district, arrive at its destination, unload, and leave was 2 hours and 49 minutes, with

delays amounting to 3 hours and 40 minutes in several instances. Approximately 17,000 truckloads of 30,000 pounds were received in 1954 in the Washington Street produce market area. (It is recognized that many smaller trucks were received on the market, however, based on information received during the survey, it was thought an estimate of 17,000 truckloads could be used.)

Assuming that costs for a truck and driver averaged \$91.00 per hour, and an average visit to the market amounted to 2.82 hours per truckload, the total cost due to the traffic situation amounted to \$431,460 per year. It is assumed that 75 percent of this loss of labor and truck time could be avoided in a new food center. This would result in a saving of \$323,660 per year in marketing costs as shown in table 5.

Table 5.—Estimated annual savings in truck and labor to truckers and buyers in proposed wholesale food distribution center, San Francisco, Calif., due to eliminating traffic congestion and installing modern loading and unloading facilities

	Present costs	Estimated costs in proposed food center	Estimated savings
	Dollars	Dollars	Dollars
Incoming trucks.....	1/ 431,460	107,800	323,660
Retail buyers.....	2/ 900,000	450,000	450,000
Total.....	1,331,460	557,800	773,660

1/ Based on 1,700 trucks per year visiting the market.

2/ Based on 1,500 buyers visiting the market 100 times a year.

Retail buyers also bear additional costs and suffer inconveniences due to traffic delays and inefficient loading facilities. A tally of buyer vehicles during 2 mornings in July 1955 showed that there were 1,686 buyer vehicles in the Washington Street produce market district during the early morning buying hours. It was found that the buyers usually visited the market on the average of 100 times per year. Most of the buyers interviewed stated that the cost of total time spent on the market amounted to an average of \$6.00 per visit for truck and labor costs or a total of approximately \$900,000 per year. A saving of 50 percent of this time in a modern food center as recommended would result in savings of \$450,000 per year. A large part of this saving may be passed on to the consumer.

Therefore, it is estimated that potential estimated savings in truck and labor time by the elimination of the present serious traffic situation and installation of adequate unloading and loading facilities would approximate \$773,660 per year.

Summary of Specified Measurable Potential Benefits to
Wholesalers for Specific Operating Cost Items

Estimated handling costs, including costs for cartage, portorage, and internal handling, but excluding managerial and selling costs, spoilage, deterioration, breakage, and shrinkage, and rental costs are the items on which an attempt was made to measure the potential benefits to be derived from a modern food distribution center in San Francisco. These potential savings are estimated to be \$2,975,205. The savings on these items vary by commodity with nearly 54 percent accruing to fresh fruit and vegetable wholesalers, and 14 percent, the smallest portion, to the meat and meat product wholesalers. In addition it is estimated there would be a saving of \$733,660 from trucking and labor costs with the elimination of the serious traffic situation in the present market. Table 6 gives a summary of measurable potential annual benefits to wholesalers moving to a new and modern wholesale food distribution center.

Table 6.—Summary of potential annual benefits to wholesalers for selected cost items by type of commodity handled, San Francisco 1954

Type of commodity handled	Whole- salers	Labor costs 1/	Spoilage deterioration, breakage, and shrinkage	Rents	Total
	Number	Dollars	Dollars	Dollars	Dollars
Fresh fruits and vegetables.....	73	1,003,138	495,490	108,664	1,607,292
Poultry, eggs, and dairy products.....	15	273,368	174,069	16,089	463,526
Meat and meat products..	56	392,658	113,907	110,886	395,679
Dry groceries.....	12	413,223	-	95,485	508,708
Total.....	156	2,082,387	783,466	109,352	2,975,205

1/ Labor costs include estimates for cartage, portorage, and internal handling, but exclude managerial and selling costs.

Benefits Which may be Difficult to Measure

The benefits of a new wholesale food center which cannot be measured in dollars would undoubtedly be as great as those which have been discussed. Such benefits would be shared by wholesalers, buyers, farmers, railroads, trucking corporations, market employees, consumers, and the city of San Francisco.

Benefits to Wholesalers

In addition to the savings described above, wholesalers would find that in a new market it would be possible for them to transact their business with fewer man-hours of labor per day. While products could be unloaded into their stores at any time of the day they desire, with regulated selling hours which could be

established in a unified market, the sales period could be much shorter than it is at present. Furthermore, many merchants would no longer find it necessary to operate in two or more places. Operating in this manner would effect considerable savings over and above the savings in portage. In addition, with operations more efficient in the improved facilities it is reasonable to expect that the competitive position of the wholesalers would be improved and the volume of business probably would increase somewhat.

Benefits to Buyers

In a consolidated market of the design proposed in this report, retail grocers in the San Francisco area and out-of-town buyers who look to San Francisco as a source of supply would be able to obtain their supplies more quickly and much more satisfactorily than they can at present. Furthermore, in facilities of this kind it would be possible to have definite hours of selling so that all buyers would know when to get to the market to have the best selection of merchandise from which to choose. Products obtained by them would be made available in better condition than when they are hauled from one market area to another and displayed in unsatisfactory facilities over a long period. It has been reported by a number of San Francisco wholesalers and out-of-town buyers that many out-of-town buyers who formerly came to San Francisco to obtain food products no longer come, or come for only a portion of their supplies, because of the time required under present conditions for making their purchases. It would appear likely that, with satisfactory consolidated market facilities, these purchases by out-of-town buyers would increase.

Benefits to Farmers

Growers of agricultural products would benefit in several ways from the provision of satisfactory market facilities in San Francisco. In the first place, with the products arriving in retail stores in more satisfactory condition and with less handling expense within the market, it is reasonable to expect the consumers would purchase larger quantities than they are now purchasing, and thus expand the outlets for farm products. Farmers would also benefit from the improvement in the operation of the price-making forces, not only on the volume which moves through the San Francisco market but also on the considerable quantities that move directly from the farm to other points and are sold on the basis of prices established in the San Francisco market. Farmers who bring their products to the San Francisco market in their own trucks would benefit through being able to get to the store of the wholesaler promptly, and to unload their trucks and return to their farms in less time than is now required. Some farmers probably would benefit in the actual net return that they would get for their products sold in the market as a result of elimination of deductions for cartage and similar services.

Benefits to Railroads

The railroads serving San Francisco have long been at a disadvantage in not being able to place carloads of merchandise for unloading directly at the stores of many merchants. When shippers compare the cost, by rail and by truck, of transporting their products to the stores, the cost of cartage from the railroad track to the store must be paid as well as the railroad freight bill, which often

makes the total transportation bill greater than the amount which would have to be included if the shipments were made by motortruck. Furthermore, the extra handling involved when the products move by rail increases the time required for getting them from the shipping point to the store. If the facilities suggested in this report were constructed, the railroads would benefit by being able to place their cars adjacent to the stores for unloading and thus be on an equal basis with the trucks.

Benefits to Market Employees

The working conditions for persons employed in food wholesaling operations in San Francisco would be materially improved in a new market. Since the buildings are designed for efficient handling by use of proper handling equipment, the task of the laborers would be less arduous, their productivity would be increased, and over a period of time their hourly earnings might be expected to increase. Regular hours of work would be expected and large amounts of overtime or irregular employment would not be necessary. With the complete rebuilding of the market facilities the general environment in which the workers operate would be materially improved and many facilities not now available to them would be provided.

Benefits to Consumers

The consumers in and around San Francisco would undoubtedly benefit as much from these improvements in market facilities as any other group. They would be able to obtain these foods in their retail stores in better condition and at more reasonable prices than they can under present conditions. With a satisfactory variety of perishable foods placed before the housewives at reasonable prices and in good condition, they undoubtedly would purchase larger quantities of these foods which dietitians state are needed in increased quantities in the average family diet.

Benefits to the City

The city of San Francisco would benefit in several ways from the construction of a new wholesale food center:

- (1) It would benefit from the increased volume of wholesale food business that would be transacted in an adequate market, and from the increased prosperity which the improved conditions would bring to the wholesalers operating in it and to the retailers who use it as a source of their supplies.
- (2) Since all citizens in San Francisco are consumers, the city would be rendering a real service to its residents by encouraging the development of satisfactory facilities for the handling of their foods in the wholesale district.
- (3) The traffic problem in the present market areas could more easily be solved.
- (4) The removal of the wholesale perishable business from some of the present market areas would facilitate the redevelopment of that part of the city.
- (5) The transfer of the wholesale food business to modern facilities would also assist the city in the solution of some of its problems pertaining to the enforcement of sanitary and fire regulations and to the prevention of crime.

CONCLUSIONS

The facts presented here show an obvious need for the construction of a new and complete wholesale food center in San Francisco. Hence, it is recommended that action be taken to bring about the construction of such a food center as soon as possible.

The new food center should consist of modern store units, with available space for wholesalers' offices, adequate platform space for unloading and loading, display, and sale of items handled in the food center, streets of adequate width to permit easy access and parking areas. The initial construction should be held to a minimum of actual needs of responsible wholesalers who have signed leases, with plans for expansion when and if it is proved necessary.

A modern food center, if built and operated along the lines recommended by this study appears to be economically feasible. It should make estimated measurable savings of \$3,732,865 per year, over and above allowances for maintenance, amortization of investment, taxes, and other current charges. This estimate is based on savings for (a) cartage, portorage, and internal handlings, \$2,082,387; (b) spoilage, deterioration, breakage, and shrinkage, \$783,466; (c) rents, \$109,352; and (d) truck and labor costs, \$773,660. No attempt was made to estimate savings and a number of other items which will benefit all concerned.

As a result of the study it was estimated that the initial development of such a wholesale food center would cost approximately \$11,775,061, including the cost of a site in the Hunters Point-South Basin district of the city.

The agencies making this study plan to issue in the near future a formal report on the study. Copies will be available for general distribution. The Federal and State Departments of Agriculture have no authority to put into effect the recommendation made here. That will be the job of the people of San Francisco if they wish to see a modern food center established in their city. However, the two Departments of Agriculture stand ready to review the plans and other details of a new food center as they are developed by local engineers, architects, and planning groups and to make whatever suggestions seem pertinent in light of past experience in similar studies in other parts of the country.

The Departments of Agriculture are looking forward to the day when San Francisco's food markets will be unsurpassed by any in the Nation. Improvements such as San Francisco plans would be a real contribution to the efforts being made throughout the country to correct weaknesses in our distribution system, so that food which can be produced in such great abundance on our farms can be moved at the lowest possible cost to consumers throughout the land.

